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| 10/519,207 | 09/21/2005 | Noriaki Yukawa | 033036.086 | 8994 |
| 25461 7590 11/23/2009 SMITH, GAMBRELL & RUSSELL SUITE 3100, PROMENADE II 1230 PEACHTREE STREET, N.E. ATLANTA, GA 30309-3592 | | | | |
| | | | EXAMINER MALEKZADEH, SEYED MASOUD | |
| | | | ART UNIT 1791 | PAPER NUMBER |
| | | | MAIL DATE 11/23/2009 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/519,207

Applicant(s)

YUKAWA ET AL.

Examiner

Seyed M. Malekzadeh

Art Unit

1791

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 8-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/22)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

In view of the amendment, filed on 09/14/2009, following rejections are **withdrawn** from the previous office action for the reason of record.

- Rejection of claims 1-7 and 12 under 35 U.S.C. 112, first paragraph
- Rejection of claims 1- 2 and 5- 7 under 35 U.S.C. 103(A) as being unpatentable over Kanehara (JP 9-132207) in view of Omura et al. (US 4,374,463)
- Rejection of claim 3 under 35 U.S.C. 013(a) as being unpatentable over Kanehara (JP '207) in view of Omura et al. (US '463) and further in view of Larsen et al. (US 5,389,190)
- Rejection of claim 4 under 35 U.S.C. 103(a) as being unpatentable over Kanehara (JP '207) in view of Omura et al. (US '463) and further in view of Teed (US 3,984,272)
- Rejection of claim 12 under 35 U.S.C. 103(a) as being unpatentable over Kanehara (JP '207) in view of Omura et al. (US '463) and further in view of Nakajima (US 4,578,140)

New Grounds of Rejection

35 USC § 112, Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims **1- 7 and 12** are rejected under 35 U.S.C. **112, second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites “second driving unit” in the thirteenth line of the claim. There is insufficient antecedent bases for this limitation in the claim because however prior to the cited limitation, the claim recites “a second double acting driving unit”, it is not clear if the recited “second driving unit” is referring to earlier recited “a second double acting driving unit” or to a new claim limitation. Clarification is requested.

Claim 2 recites “the tape feeding operation” in the third line of the claim. There are insufficient antecedent bases for this limitation in the claim because prior to the cited limitation, the claim fails to define “a tape feeding operation”. Clarification is requested.

Claim 4 recite the limitation “said double-acting driving unit” in the fourth line of the claim. There is insufficient antecedent basis for this limitation in the claim because the claim fails to define if the recited “said

double-acting driving unit" is referring to the previously cited first or second double-acting driving unit. Clarification is requested.

Claims 5 and 7 recite the limitation "the double-acting driving unit" in the fourth line of the claim. There is insufficient antecedent basis for this limitation in the claim because by the claim language it is not clear if the recited "said double-acting driving unit" is referring to the previously cited first or second double-acting driving unit. Clarification is requested.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

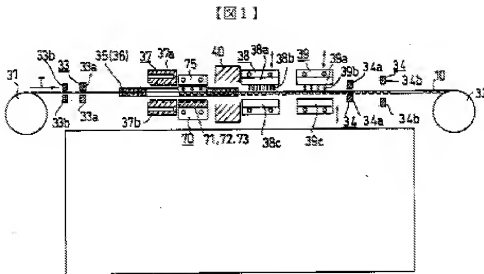
The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1- 2 and 5- 7 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Nagasawa (JP 10- 273107) in view of Omura et al (US 4,374,463).

Note: Nagasawa (JP 10- 273107) is the prior art submitted by the applicant on 12/22/2004.

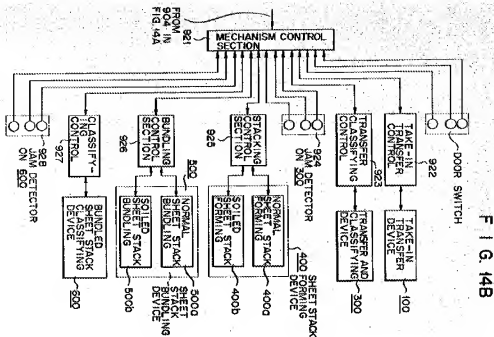
Nagasawa (JP '107) teach a carrier tape embossed machine comprising a supply reel (31) as a tape paying-out unit, a heating plate (37) having an upper heater block (37a) and a lower heater block (37b), an embossed molding die (70) as a forming unit for embossing on the tape, an air box (75) connected to with the rise and fall of the cylinder attached to the embossed molding die (70), the thermo-regulator (40), the feedholes punched metal mold (38) as a perforating unit for perforating at least a feeding hole in the tape, a take up reel (32) as a tape taking up unit for taking up the finished tape, a first running drive mechanism (33) and a second running drive mechanism (34) both together, as a tape feeding unit (33, 34), for feeding the tape in which the feeding unit (33 and 34) includes a first move zipper (33a) as a first double acting driving unit and a second move zipper (34a) as a second double acting driving unit in which both have an up and down motion to reciprocally support the upper and lower sides of the tape and also include a motion in the direction of the tape length to move the tape forward in the machine direction. (See paragraphs [0014] - [0017], [0019], [0023], and [0038] and figure 1)



Thus, **as to claim 1**, Nagasawa (JP '107) teach a carrier tape embossed machine comprising a tape paying out unit (31), a tape feeding unit (33a and 34a), an embossing unit (70), a perforating unit (38), a tape taking up unit (32), a first double acting driving unit (33a) aligned with a feeding direction of the tape along a straight driving path and being fluid operated for driving the tape feeding unit, and a second double acting driving unit (34a) aligned with the feeding direction of the tape along the straight driving path and being fluid operated for driving the tape taking up unit.

Further, Nagasawa (JP '107) teach a zipper (33b) as a holding means, which is associated with the first double acting driving unit (33a), to delay a run of the tape in the machine direction. (See paragraph [0015]) **However**, Nagasawa (JP '107) **fail to teach** a controller for controlling driving/stopping of the second double acting driving unit in association with driving/stopping of the first double-acting driving unit.

In the analogous art, Omura et al (US 4,374,463) teach an apparatus for processing sheet like materials in which the apparatus comprises a unit sheet-stack transfer mechanism (100) functioning similar to the first double-acting unit, a transfer classifying device (300) functioning similar to the second double-acting unit, a mechanism control section (921) as a controller, a take in transfer control (922) connecting the first double-acting unit (100) and the controller (921), and a transfer classifying control (923) connecting a second double-acting unit (300) with the controller (921). Furthermore, the apparatus comprises a mechanism for forming a bundling loop, a bundling mechanism having means for inserting the unit sheet stack into the bundling loop, wherein the bundling loop forming mechanism comprises a plurality of guide plates. (See column 23, lines 57-68; column 24, lines 1-25; column 25, lines 36- 69, and figure 14B)



Therefore, **it would have been obvious** for one of ordinary skill in the analogous art at the time of applicant's invention to modify the teachings of Nagasawa (JP '107) through **providing** a controller which is associated with the both of the first double-acting driving unit and the second double-acting driving unit **in order to** improve the workability and to control the apparatus operation which results in avoiding the damage of the produced articles, as suggested by Omura et al (US '463)

Further, **as to claim 2**, Nagasawa (JP '107) discloses a paying out operation by the tape paying out unit (31) is effected by the double acting driving unit (33a) provided for the tape feeding unit for feeding a tape feeding operation.

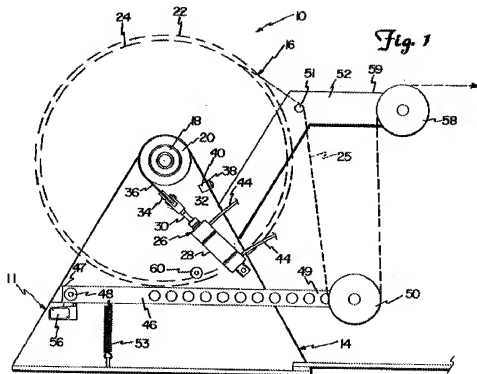
Further, Nagasawa (JP '107) teach a fixed zipper (34b) located on the upper and lower sides of the tape so that by an up and down motion fastens the tape and the tape is kept from moving. (See paragraph [0016]) Thus, **as to claims 5- 6**, Nagasawa (JP '107) discloses a tape holding means (33b) moveable back and forth in unison by the first double-acting driving unit (33a) for the tape feeding unit and a stopper (34b) for restricting a position of the tape holding means (33b) to adjust a feeding amount of the tape, wherein the stopper (34b) includes a forward-most position determining portion, a rear-most position determining portion and a feeding amount adjusting portion in which the feeding amount of the tape being adjustable by a feeding amount adjusting portion. Further, **as to claim 7**, Nagasawa (JP '107) discloses the tape holding means (33b) includes at least one pair of tape holders provided across the forming unit (70) and the perforating unit (38), and a connecting member for connecting the pair of tape holders together to be movable back and forth by the first and second double-acting driving units (33a and 34a).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasawa (JP '107) in view of Omura et al (US '463), as applied to claims 1- 2 and 5- 7 above, and further in view of Larsen et al (US 5,389,190).

Combined teachings of Nagasawa (JP '107) and Omura et al (US '463) teach all the structural limitations of a carrier tape forming apparatus, as

discussed above in rejection of claims 1- 2 and 5- 7; **however**, the combined teachings of Nagasawa (JP '107) and Omura et al (US '463) **fail to teach** the tape paying-out unit includes a dancer roller for adjusting a paying-out operation and a brake belt for braking a reel shaft of the pay-out reel.

In the analogous art, Larsen et al. (US 5,389,190) teaches an apparatus for applying a twist-tie to a multiple re-closeable, flexible packaging container including a payout mechanism for holding a supply of twist tie material; further, an extracting and cutting mechanism is configured to extract a continuous length of the twist-tie material from the supply of the twist-tie material and cut a twist tie of a desired length. (See abstract) Furthermore, Larsen et al. (US '190) teaches the payout mechanism (16) includes a dancer arm (46) pivotally secured as a first end (47) via a suitable fastener (48) to the secondary support frame (14), and a second end (49) of the dancer arm (46) includes a rotatable guide roller (50) over which the continuous length of twist-tie material (25) travels subsequent to passing over a guide pin (51) mounted on an extension arm (52) of the secondary support frame (14). (See lines 8-25, column 4 and figure 1)



Further, Larsen et al. (US '190) teaches a brake mechanism (26) forming part of the payout assembly (16) includes pneumatic cylinder (28) having an extensible rod (30). A free end (32) of the extensible rod (30) is secured to a first end (34) of a brake band (36), as a bracket belt. The brake band (36) extends around the support shaft (20) where a second end (38) of the brake band (36) is fixed to the secondary support frame (14) by a clamp (40). (See lines 54-62, column 3)

It would have been obvious for one of ordinary skill in the art at the time of applicant's invention to modify the carrier tape forming apparatus as taught by combined teachings of Nagasawa (JP '107) and Omura et al (US '463) through **providing** a dancer roller and a brake belt for braking a reel shaft of

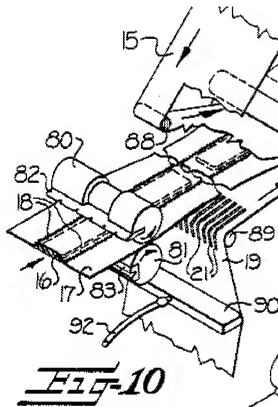
the pay-out reel of the tape paying-out unit **in order to** extract an efficient amount of tape from the paying-out unit while minimizing the defects and scraps during operation of the apparatus, as suggested by Larsen et al. (US '190).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasawa (JP '107) in view of Omura et al (US '463), as applied to claims 1-2 and 5-7, and further in view of Teed (US 3,984,272).

Combined teachings of Nagasawa (JP '107) and Omura et al (US '463) teach all the structural limitations of a carrier tape forming apparatus, as discussed above in rejection of claims 1-2 and 5-7; **however**, the combined teachings of Nagasawa (JP '107) and Omura et al (US '463) **fail** to teach the apparatus further includes a slitting unit for slitting or cutting off a width-wise end of the tape.

In the analogous art, Teed (US '272) teaches an apparatus for successively forming disposable diapers wherein the apparatus comprises a supplying and positioning unit, and also an embossing and securing unit wherein the apparatus comprises a cutting means cooperating with the positioning means to cut the elongate pads of fibers in which the cutting means comprises feed rolls (80 and 81) positioned on each side of the elongate continuous fibers in which, together, the feed rolls form a nip there-between for receiving and feeding there-through the elongate continuous fibers.

Furthermore, Teed (US '272) teaches each of the rollers (80 and 81) include a cutting blade (82 and 83), respectively. Therefore, the prior art teaches a slitting unit for slitting or cutting off a width off a width-wise end of the continuous fibers.

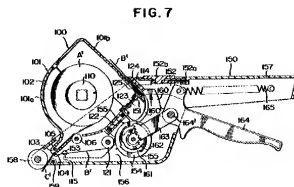


It would have been obvious for one of ordinary skill in the art at the time of applicant's invention to modify the carrier tape forming apparatus as taught by combined teachings of Nagasawa (JP '107) and Omura et al (US '463) through **providing** a slitting or cutting unit for slitting or cutting off a width-wise end of the tape **in order to** cut off a width-wise end of the tape in order to improve the apparatus by minimizing a cumbersome and tedious hand work for cutting the elongated tapes, as suggested by Teed (US '272).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasawa (JP '107) in view of Omura et al (US '463) as applied to claims 1- 2 and 5- 7 above, and further in view of Nakajima (US 4,578,140)

Combined teachings of Nagasawa (JP '107) in view of Omura et al (US '463) teach all the structural limitations of a carrier tape forming apparatus, as applied to claims 1- 2 and 5- 7; **however**, the combined teachings of Nagasawa (JP '107) and Omura et al (US '463) **fail** to teach the take-up reel moves with a pinion gear and a rack gear, as claimed in claim 12.

In the analogous art, Nakajima (US '140) teaches a cassette type labeler comprising a labeler body and a cassette case adapted to be attached to said labeler body comprising a base sheet, a printed label on the base sheet, an outlet, a peeling member at the outlet for peeling each of the printed label off from the base sheet, and stopping means for preventing movement of the base sheet through the labeler, wherein the labeler body intermittently feeds the base sheet through the labeler. (See column 16, lines 42- 68) Further, Nakajima (US '140) discloses a sprocket (154) which is connected to a gear (162), as a pinion gear, via a one way clutch (161) so that the sprocket (154) may be rotated only in the direction in which the base sheet (B') is carried rearward, and one end of a driving arm (163), as rack gear, engage with the pinion gear (162) to provide a rotation of sprocket (154). (See column 9, lines 28- 34 and figure 7)



It would have been obvious for one of ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Nagasawa (JP '107) and Omura et al (US '463) through **providing** a take-up reel which moves by a pinion gear and a rack gear **in order to** provide a tape taking up unit with improved workability having an easy and smooth operation, as suggested by Nakajima (US '140).

Response to Arguments

Applicant's **arguments** filed on 08/14/2009 have been fully considered but they **are not persuasive**.

Applicant's **arguments** in regard to the prior art of Kanehara (JP 9-132207), which were used in the previous office action are acknowledged; however, the arguments are **moot** because Kanehara (JP 9-132207) has not been used in the above new grounds of rejections.

Further, applicant argues that "Kanehara (JP 9-132207) does not recite a driving unit aligned with a feeding unit. Omura does not appear to remedy

Kanehara's deficiency" (See remarks, page 7, lines 19- 21) applicant's **arguments** was fully considered but was **not found persuasive** because now, in the above new grounds of rejection, Omura (US '463) has been used as a secondary reference for teaching different features other than those have been argued by the applicant. The newly applied prior art of Nagasawa (JP '107) clearly teaches the driving unit aligned with the feeding unit.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Masoud Malekzadeh whose telephone number is 571-272-6215. The examiner can normally be reached on Monday – Friday at 8:30 am – 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin, can be reached on (571) 272-1189. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the

Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Seyed M. Malekzadeh/
Examiner, Art Unit 1791

/Eric Hug/
Primary Examiner, Art Unit 1791